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TECHNICAL NOTE

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U.S. DEPARTMENT OF THE INTERIOR - BUREAU OF LAND MANAGEMENT

ADJUSTABLE WIRE FENCES FOR

FACILITATING BIG GAME MOVEMENT

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ADJUSTABLE WIRE FENCES FOR FACILITATING BIG GAME MOVEMENT

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A number of different methods for enhancing big game (particularly antelope) movement under, through, or over fences have been tried during the last 15-20 years. These methods have been variably successful under certain conditions. The structures of fence modifications involved, however, were (and are) frequently expensive, complicated and/or cumbersome. Most importantly, they affected a very small area.

Raising or lowering one or more wires can be the most successful and efficient fence modification for big game passage during periods when livestock are not present. Adjustable wire fences can allow nearly total freedom of movement by big game through any desired length of fence. Fence maintenance problems caused by drifting snow or big game can be greatly reduced if not eliminated. Only the problem wires need be moved. All others can be fastened securely to the post. Depending on the wire fastener used, adjustment can be made nearly as fast as a person can walk.

The development of the Davision Fence Clip (Fig. 4c) has greatly enhanced the utility of adjustable wire fencing. It allows, for the first time, existing fences to be modified quickly with little effort and at minimal cost. The clip is equally adaptable to wood or steel posts. A special pair of pliers is required to attach the clip to steel posts. Maintenance incurred by using the Davision Clip is virtually zero. One person can adjust one wire of a mile of fence in about 30 minutes. Cost (1979) is \$37.50 for the pliers and fifteen cents for each clip. Adjusting one wire of a mile of fence (two clips per post) would add only \$93.00 (not including pliers) additonal expense. (Available from L.G. Davision & Sons, Inc., c/o Prairie Stage, Mountain Home, Idaho 83647)

The staple lock fastener (Fig. 4a) can be used effectively on wood posts to permit wire adjustment. It is only slightly slower to install and use than the metal clip. The requirement of wood posts, which may increase fencing costs upwards of \$6.00 per rod, is its greatest drawback. The ready availability of materials, however, may justify the staple lock system on short sections of fence. The hook (Fig. 4c) can be used in conjunction with the staple lock.

A. Uses Although antelope and deer are used for illustrative purposes, any species of big game animal can be accomodated.

1. Antelope

Bottom wire to ground clearance of 16"-18" has been generally accepted as tolerable for antelope passage under optimal conditions. A fence meeting this specification still constitutes a hindrance to free movement and, under certain snow or high stress conditions, may prove lethal. Observations indicate antelope frequently select a crossing which has the greatest ground to bottom wire clearance though only an inch or two may be involved.

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Clearance under a fence can be greatly enhanced by merely lifting the bottom wire up one position. Figure 1b. illustrates an 11" gain by this simple procedure. The resulting space of 29" is only about five to six inches less than the average shoulder height of most adult antelope.

Wire adjustment shown in Figure 1c. allows almost total freedom of movement and may be necessary only where deep or drifting snow presents a problem.

2. Deer

The standard 42" deer fence (Figure 2a.) on level ground can generally be negotiated by adult deer with little apparent difficulty. When deer are in a winter weakened condition, deep snow is present, or when the fence is located on a slope contour (Figure 3) the 42" fence can present a significant barrier.

The primary objective of wire adjustment is to reduce the deer's dependency on its hind legs for jumping. As wire height approaches the length of a deer's legs (approximately 20"), this dependency nears zero.

Lowering the top wire of a 42" fence 17" and the second wire 5" reduces barrier height to about 25" (Figure 2b). This height should be negotiable by deer under virtually all conditions.

3. Miscellaneous

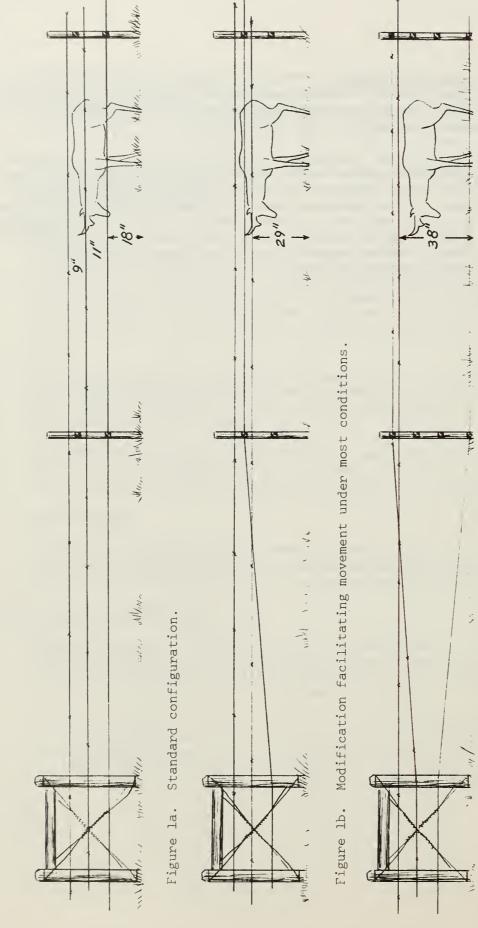
Adjustable wire fences can be used to good advantage in reducing or eliminating fence maintenance problems caused by snow drifts or by such big game species as elk and moose.

B. Construction Considerations

 <u>Wire deflection</u> - A tighter fence can be maintained by keeping wire deflection to a minimum. Although not necessarily desirable from a big game standpoint, a tight fence is needed in some livestock containment situations.

It will be noted in Figure 1b., a 29" clearance could have been obtained by taking the bottom wire to ground level. Wire deflection would have been aproximately 18" by doing so. As illustrated, however, deflection is only about 13".

- 2. Smooth wire position Some new barbed-wire has extremely long barbs (.75"). It may be advisable to sacrifice a few inches of clearance and place the smooth bottom wire beneath, rather than above (Figure 1b.), the second wire.
- 3. <u>Flagging</u> As indicated in the Guidelines for the Management of Pronghorn Antelope (Proc. Eighth Biennial Pronghorn Antelope Wksp. 1978), temporary flagging must be attached to any new fence. It is suggested that, if adjusted fence configuration results in only the top wire remaining fixed, it be <u>permanently</u> flagged. It is questionable a single wire would be sufficiently visible without flagging to prevent an antelope from colliding with it.



THREE-STRAND 38 INCH ANTELOPE FENCE MODIFICATION

Figure 1c. Adjustment allowing almost total freedom of movement.

FOUR-STRAND 42 INCH DEER FENCE MODIFICATION

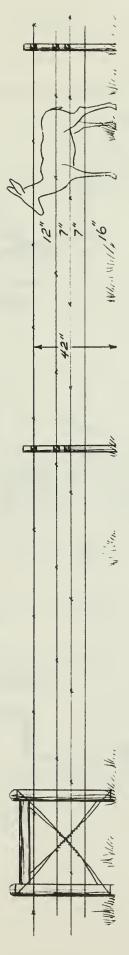


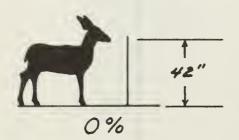
Figure 2a. Standard configuration.

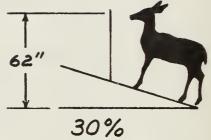


Figure 2b. Modification allowing nearly free movement.

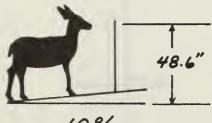
BARRIER HEIGHT INCREASE OF 42" FENCE ON CONTOUR

OF DIFFERENT PERCENT SLOPES

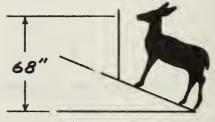




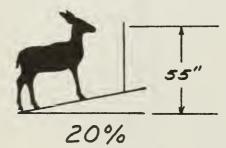




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40%



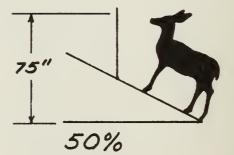


Figure 3

Adapted from: Anderson and Bernt, 1979, Big Game vs. Fences. BLM Inf. Memo DSC 79-108, Denver, CO

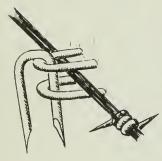


Figure 4a.

Staple lock - Simple and effective on wood posts. Holds wire tight if standard fence staples are used. Lock staple (or nail) easy to lose.

Figure 4b.

Hook - Made from large square-end staple. Quite adequate for bottom hook but difficult to drive into untreated portion of post. Use in conjunction with staple lock or metal clip.

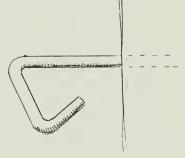
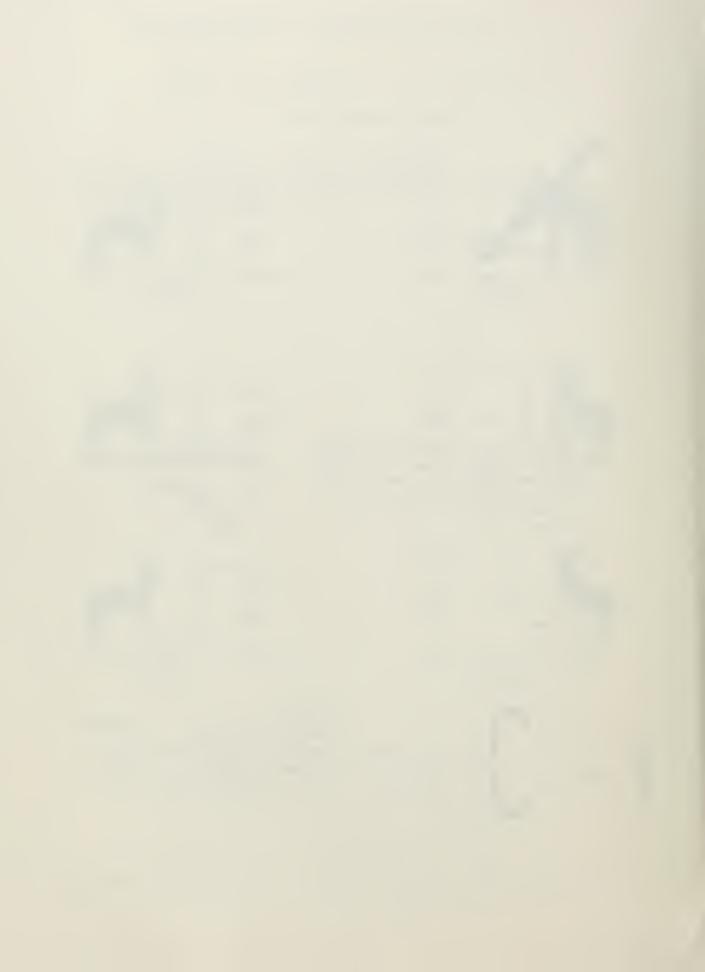




Figure 4c.

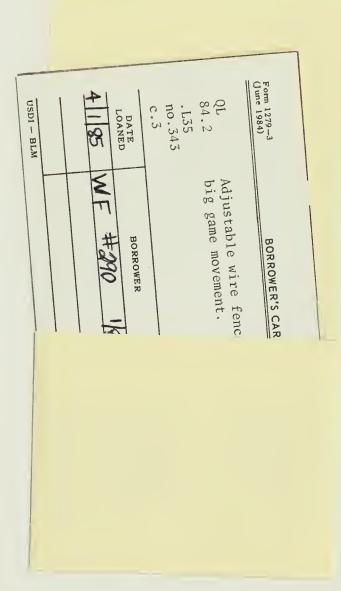
Metal clip - Excellent on either wood or steel posts. Easy to install, no maintenance and allows fastest wire adjustment. Existing fences easy to modify with this clip.

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